

## REMARKS/ARGUMENTS

### A. Remarks.

Claims 1-78 are pending, claims 1-78 stand rejected. The drawings are objected to for not including the term prior art and also for not including certain reference numerals on the drawings. Claims 30-31 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-4, 5-9, 7-19, 23, 40-43, 44-47, 55-57, and 61 stand rejected as being anticipated by Monchalin et al., U.S. Patent No. 5,131,748. Claims 10-13 and 48-51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Blouin et al., U.S. Patent No. 5,680,212. Claims 14-16, 20-22, 35-39, 58-60, and 75-78 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Monchalin et al. '748. Claims 24-34 and 62-74 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Monchalin et al. '748 in view of Blouin et al. '212.

### B. Response

#### 1. Drawings

Figures 1-4 stand objected to for not having the designation as "prior art" and Figures 4, 8, 12, 13, 14, and 15 stand objected to for failing to comply with 37 CFR 1.84(p)(5) for including reference numerals not found in the description. In response, replacement sheets for Figures 1-4, 8, and 11-15 were submitted in a response filed November 11, 2007.

#### 2. Claim Rejections 35 U.S.C. § 112

Claims 30-31 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, claims 30-31 recite the limitation of "the data base"

in line 1. Insufficient antecedent basis was found for this limitation. In response, claims 30 and 31 are being amended with this paper to depend from claim 29.

3. Claim Rejections 35 U.S.C. § 102(b) – claims 1-4 and 40-43

Claims 1-4 and 40-43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Monchalin et al. '748. Monchalin was cited for the proposition that it disclosed an acousto-optic cell 54 as a wave characteristic adjusting device and a laser and an acousto-optic cell for adjusting wave characteristics of a beam.

In response, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).

Applicants respectfully disagree that the system of claims 1 or the method of 40 is found in Monchalin et al. '748. More specifically, Monchalin et al. '748 fails to include a wave characteristic adjusting device that compensates for "the altered wave characteristics caused by the scanning motion of the probe beam of the two wave mixing interferometer." Since this reference fails to mention this feature for either an apparatus or a benefit of performing; Monchalin et al. '748 therefore does not include each and every element of claims 1 or 40. It is therefore respectfully requested that this reference be removed as a reference for the rejection of these claims and there respective independent claims.

4. Claim Rejections 35 U.S.C. § 102(b) – claims 5-9 and 44-47

Claims 5-9 and 44-47 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Monchalin et al. '748. With regard to claims 5 and 44, Monchalin was cited for the proposition that it discloses a laser as a sonic energy generator and an electro-optic phase shifter as a wave characteristic adjusting device. In response, amended claim 5 now includes the wave

characteristic adjusting device as compensating for the altered wave characteristic caused by the scanning motion of the probe beam of the two wave mixing interferometer. The method of claim 44 includes the step of compensation for "the altered wave characteristic caused by the scanning motion of the probe beam of the two wave mixing interferometer." Applicants respectfully assert that the compensation apparatus and method of claims 5 and 44 are not found in Monchalin et al. '748. It is respectfully requested that the rejection of these claims and their dependent claims be reconsidered and removed.

5. Claim Rejections 35 U.S.C. § 102(b) – claims 10-13 and 48-51

Claims 10-13 and 48-51 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Blouin et al. '212. Blouin was cited for teaching a coherent electromagnetic energy generator, having trigger electronics 26 acting as a wave characteristic controlling system. Claim 10 includes the element of a "wave characteristic controlling circuitry operable to adjust the wave characteristic of the at least one beam of coherent electromagnetic energy to compensate for the wave characteristic distortion caused by a scanning motion of the probe beam of the two wave mixing interferometer." Pending claim 48 includes one element of its method that compensates for wave characteristic distortion caused by the above described scanning. Blouin et al. '212 does not include a device or method wherein the wave characteristic distortion caused by a scanning motion is compensated. As such, applicants respectfully request that Blouin et al. '212 is an inappropriate reference for the rejection of claims 10 and 48 under 35 U.S.C. § 102(b). It is respectfully requested that this reference be reconsidered and removed for these claims and their respective dependent claims.

6. Claim Rejections 35 U.S.C. § 102(b) – claims 17-19 and 55-57

Claims 17-19 and 55-57 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Monchalin et al. '748. The wave characteristic adjusting device of claim 17 includes the ability to compensate for wave characteristic distortion caused by a scanning motion of a probe beam. Similarly, the method of claim 55 includes the step of compensating for wave characteristic distortion caused by probe beam scanning motion. As noted above, Monchalin et al. '748 fails to include an apparatus or a method for adjusting for such wave characteristic distortion. Because of this applicants respectfully request that this rejection of claims 17 and 55 (including their respective dependent claims) be reconsidered and removed.

7. Claim Rejections 35 U.S.C. § 102(b) – claims 23 and 61

Claims 23 and 61 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Monchalin et al. '748. Pending claim 23 recites a wave characteristic adjusting device configured to compensate for distortion from scanning by the probe beam. Similarly, currently amended claim 61 includes a step of directing a wave characteristic adjusting device that compensates for distortion caused by scanning the probe beam. Since such scanning and compensation for the distortion produced by scanning with the probe beam was not shown in Monchalin et al. '748, it is respectfully requested that the rejection of these claims under this reference be reconsidered and removed.

8. Claim Rejections 35 U.S.C. § 103(a) – claims 14-16 and 52-54

Claims 14-16 and 52-54 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Monchalin et al. '748. In response, to sustain a rejection under 35 U.S.C. § 103(a) a prima facie case of obviousness must be established. M.P.E.P. § 2142. To establish a prima facie case of obviousness there must be some suggestion or motivation either in the references themselves or

in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations. *Id.*

Pending claim 14 includes the element of the wave characteristic of the beam of coherent electromagnetic energy being altered to compensate for distortion caused by a scanning motion of a probe beam. This element is also found as a step of the method of claim 52. Since Monchalin et al. '748 does not teach or suggest addressing wave characteristic distortion caused by the scanning motion of a probe beam, this reference does not consider all of the elements of claims 14 or 52. As such, applicants respectfully request that this reference be removed as the basis of the rejection of these claims and their respective dependent claims.

9. Claim Rejections 35 U.S.C. § 103(a) – claims 20-22 and 58-60

Claims 20-22 and 58-60 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Monchalin et al. '748. The wave characteristic adjusting device of claim 20 includes the capability of adjusting the wave characteristic of a coherent electromagnetic beam to compensate for *scanning* motion distortion of a probe beam. The method of claim 58 also includes a step of adjusting a coherent beam of electromagnetic energy to compensate for wave characteristic distortion caused by a *scanning* motion of a probe beam. Because Monchalin et al. '748 does not disclose adjusting the wave characteristic to compensate for wave characteristic distortion caused by a *scanning* motion of a probe beam, Monchalin et al. '748 is an inappropriate reference upon which to base a rejection of claims 20 and 58. Applicants respectfully request that this rejection be reconsidered and removed with regard to these claims and their respective dependent claims.

10. Claim Rejections 35 U.S.C. § 103(a) – claims 24-34 and 62-74

Claims 24-34 and 62-74 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Monchalin et al. '748 in view of Blouin et al. '212. In response, claims 24-34 all depend, either directly or indirectly, from claim 22. Also, claims 62-74 depend, directly or indirectly, from claim 61. For the reasons listed above explaining why claims 22 and 61 are allowable, their respective dependent claims are also allowable over these cited references.

11. Claim Rejections 35 U.S.C. § 103(a) – claims 35-39 and 75-78

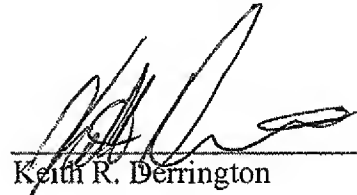
Claims 35-39 and 75 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Monchalin et al. '748 in view of Blouin et al. '212. In response, amended claims 35 and 75 both include an element directed to compensating for wave distortion produced by scanning with a beam of coherent electromagnetic energy. As noted previously, neither Monchalin et al. '748 nor Blouin et al. '212 teach, suggest, or disclose compensating for wave distortion wherein the distortion is produced by the scanning of a beam. As such, each and every element of these claims is not found in these references and thus they should be removed as a basis for the rejection of these claims.

## CONCLUSION

It is believed that the foregoing response is full and complete. Applicants respectfully request reconsideration of the instant application in light of the foregoing response and amendments. Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of the application, the Examiner is invited to contact the Applicants' representative by telephone or fax.

Date: June 2<sup>nd</sup>, 2009

Respectfully submitted,



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